```
DATE FILED: Dec. 13, 1994
ART-UNIT: 125
PRIM-EXMR: Zohreh Fay
LEGAL-REP: Jeffrey S. Schira
FILE 'USPAT' ENTERED AT 19:19:16 ON 02 JUL 1997
                    WELCOME TO THE
              U.S. PATENT TEXT FILE
                                                                                                                                                                               US PAT NO: 5,621,102 [IMAGE AVAILABLE]
DATE ISSUED: Apr. 15, 1997
                                                                                                                                                                                                                                                                                      L3: 6 of 93
=> s (platelet derived growth factor#) or pdgf
10509 PLATELET
                                                                                                                                                                                                    Process for preparing enantiomerically pure xanthine
                                                                                                                                                                               derivatives
INVENTOR: James A. Bianco, Seattle, WA
          284821 DERIVED
         123324 GROWTH
381215 FACTOR#
                                                                                                                                                                                                Paul Woodson, Bothell, WA
David Porubek, Edmonds, WA
Jack Singer, Seattle, WA
            1057 PLATELET DERIVED GROWTH FACTOR#
(PLATELET(M)DERIVED(M)GROWTH(M)FACTOR#)
                                                                                                                                                                               ASSIGNEE: Cell Therapeutics, Inc., Seattle, WA (U.S. corp.)
APPL-NO: 08/456,897
                                                                                                                                                                               APPL-NO: 08/456,897
DATE FILED: Jun. 1, 1995
              1245 (PLATELET DERIVED GROWTH FACTOR#) OR PDGF
                                                                                                                                                                               PRIM-EXMR: Alan L. Rotman
LEGAL-REP: Stephen Faciszewski
=> s homodimer or AA
337 HOMODIMER
           21018 AA
            21300 HOMODIMER OR AA
                                                                                                                                                                               US PAT NO: 5,620,984 [IMAGE AVAILABLE] L3: 7 of 93
DATE ISSUED: Apr. 15, 1997
TITLE: Enatiomerically pure hydroxylated xanthine compounds to
 => s |1 (2a) |2
                93 L1 (2A) L2
                                                                                                                                                                               treat inflammatory diseases
INVENTOR: James A. Bianco, Seattle, WA
 => d bib 1-
                                                                                                                                                                                                 Paul Woodson, Bothell, WA
                                                                                                                                                                                                 David Porubek, Edmonds, WA
Jack Singer, Seattle, WA
US PAT NO: 5,644,026 [IMAGE AVAILABLE] L3: 1 of 93

DATE ISSUED: Jul. 1, 1997

TITLE: Epitaxin, a cell motility factor

INVENTOR: Yu Yamaguchi, San Diego, CA

Motoyuki Shimonaka, San Diego, CA

ASSIGNEE: La Jolla Cancer Research Foundation, Ja Jolla, CA (U.S.
                                                                                                                                                                                ASSIGNEE: Cell Therapeutics, Inc., Seattle, WA (U.S. corp.)
APPL-NO: 08/456,898
                                                                                                                                                                                ASPIL-NO: 08/456,898
DATE FILED: Jun. 1, 1995
ART-UNIT: 125
PRIM-EXMR: Theodore J. Criares
LEGAL-REP: Stephen Faciszewski, Jeffrey B. Oster
ASSIGNEE: La Joila Cancer Researc
corp.)

APPL-NO: 08/237,280

DATE FILED: May 3, 1994

ART-UNIT: 181

PRIM-EXMR: Cecilia J. Tsang

ASST-EXMR: Anish Gupta

LEGAL-REP: Campbell & Flores LLP
                                                                                                                                                                                US PAT NO: 5,620,687 [IMAGE AVAILABLE] L3: 8 of 93
DATE ISSUED: Apr. 15, 1997
TITLE: Inhibition of intimal hyperplasia using antibodies to PDGF
                                                                                                                                                                                beta receptors
INVENTOR: Charles E. Hart, Brier, WA
                                                                                                                                                                                INVENTOR: Chanes E. Hart, Brier, WA
Richard D. Kenagy, Seattle, WA
Alexander W. Clowes, Seattle, WA
ASSIGNEE: ZymoGenetics, Inc., Seattle, WA (U.S. corp.)
University of Washington, Seattle, WA (U.S. corp.)
 US PAT NO: 5,629,315 [IMAGE AVAILABLE] L3: 2 of DATE ISSUED: May 13, 1997

TITLE: Treatment of diseases using enantiomerically pure hydroxylated xanthine compounds
                                                                                                         L3: 2 of 93
                                                                                                                                                                                APPL-NO: 08/368,880

DATE FILED: Dec. 30, 1994

ART-UNIT: 186

PRIM-EXMR: Christina Y. Chan

ASST-EXMR: Phillip Gambel

LEGAL-REP: Gary E. Parker, Debra K. Leith, Deborah A. Sawislak
  INVENTOR: James A. Bianco, Seattle, WA
Paul Woodson, Bothell, WA
David Porubek, Edmonds, WA
  Jack Singer, Seattle, WA
ASSIGNEE: Cell Therapeutics, Inc., Seattle, WA (U.S. corp.)
APPL-NO: 08/456,900
  DATE FILED: Jun. 1, 1995
ART-UNIT: 125
PRIM-EXMR: Theodore J. Criares
LEGAL-REP: Stephen Faciszewski
                                                                                                                                                                                US PAT NO: 5,618,837 [IMAGE AVAILABLE]
DATE ISSUED: Apr. 8, 1997
TITLE: PDGF antagonists III
INVENTOR: Charles E. Hart, Brier, WA
Oliver J. McConnell, Wayne, PA
                                                                                                                                                                                                                                                                                        L3: 9 of 93
  US PAT NO: 5,629,286 [IMAGE AVAILABLE] L3: 3 of 93
DATE ISSUED: May 13, 1997
TITLE: Homeopathic dilutions of growth factors
INVENTOR: Barbara Brewitt, 5557 - 36th Ave. NE., Seattle, WA
                                                                                                                                                                                                  Robert R. West, Seattle, WA
Theresa Martinez, Greenbank, WA
                                                                                                                                                                                 ASSIGNEE: ZymoGenetics, Inc., Seattle, WA (U.S. corp.)
APPL-NO: 08/483,216
DATE FILED: Jun. 7, 1995
ART-UNIT: 125
PRIM-EXMR: Kimberly Jordan
LEGAL-REP: Gary E. Parker, Debra K. Leith, Deborah A. Sawislak
  98105-2313
APPL-NO: 08/710,040
DATE FILED: Sep. 10, 1998
ART-UNIT: 338
PRIM-EXMR: Robert A. Hafer
ASST-EXMR: Challin Smith
   LEGAL-REP: Ann W. Speckman, Janet Sleath
                                                                                                                                                                                  US PAT NO: 5,618,678 [IMAGE AVAILABLE] L3: 10 of 93
DATE ISSUED: Apr. 8, 1997
TITLE: Methods for detecting PDGF agonist or antagonist activity
  US PAT NO: 5,626,617 [IMAGE AVAILABLE]
DATE ISSUED: May 6, 1997
                                                                                                          L3: 4 of 93
                                                                                                                                                                                 TITLE: Methods for detecting PDGF agonist or antagonis using PDGF. alpha.

INVENTOR: James D. Kelly, Seattle, WA
ASSIGNEE: ZymoGenetics, Inc., Seattle, WA (U.S. corp.)

08/340,754

DATE FILED: Nov. 16, 1994

ART-UNIT: 182

PRIM-EXMR: Stephen G. Walsh
ASST-EXMR: Sally P. Teng
LEGAL-REP: Townsend and Crew
                      Methods for treating disorders by administering radio
                     frequency signals corresponding to growth factors
R: Barbara Brewitt, 6812 Woodlawn Ave. NE., Seattle, WA
   INVENTOR:
  INVENTOR: Barbara Brewitt, (
98115-5420
APPL-NO: 08/575,840
DATE FILED: Dec. 20, 1995
ART-UNIT: 338
PRIM-EXMR: Robert A. Hafer
ASST-EXMR: Chalin Smith
    LEGAL-REP: Ann W. Speckman, Janet Sleath
                                                                                                                                                                                  US PAT NO: 5,612,349 [IMAGE AVAILABLE]
DATE ISSUED: Mar. 18, 1997
                                                                                                                                                                                                                                                                                          L3: 11 of 93
   US PAT NO: 5,624,893 [IMAGE AVAILABLE]
DATE ISSUED: Apr. 29, 1997
                                                                                                                                                                                                      Enantiomerically pure hydroxylated xanthine compounds to
   DATE ISSUEU: Apr. 29, 1997

TITLE: Pharmaceutical compositions and methods of treatment of the cornea following laser irradiation

INVENTOR: John M. Yanni, Burlesson, TX

ASSIGNEE: Alcon Laboratories, Inc., Fort Worth, TX (U.S. corp.)

08/355,481
                                                                                                                                                                                   treat shock symptoms
INVENTOR: James A. Bianco, Seattle, WA
                                                                                                                                                                                                   Paul Woodson, Bothell, WA
David Porubek, Edmonds, WA
                                                                                                                                                                                                    Jack Singer, Seattle, WA
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APPL-NO: 08/456,899

DATE FILED: Jun. 1, 1995

ART-UNIT: 125

PRIM-EXMR: Theodore J. Criares

LEGAL-REP: Jeffrey B. Oster
ASSIGNEE: Cell Therapeutics, Inc., Seattle, WA (U.S. corp.) 08/457,062
APPLINU: USV457,U52
DATE FILED: Jun. 1, 1995
ART-UNIT: 125
PRIM-EXMR: Theodore J. Criares
LEGAL-REP: Stephen Faciszewski
                                                                                                                                                                                                                                           US PAT NO: 5,567,704 [IMAGE AVAILABLE] L3: 18 of 93
DATE ISSUED: Oct. 22, 1996
TITLE: R-enatiomerically pure hydroxylated xanthine compounds to
US PAT NO: 5,605,816 [IMAGE AVAILABLE] L3: 12 of 93
DATE ISSUED: Feb. 25, 1997
TITLE: Recombinant DNA encoding PDGF A-chain polypeptides
INVENTOR: Carl-Henrik Heldin, Uppsala, Sweden
                                                                                                                                                                                                                                                                     treat baldness
                                                                                                                                                                                                                                           INVENTOR: James A. Bianco, Seattle, WA
Paul Woodson, Bothell, WA
David Porubek, Edmonds, WA
                        Christer Betsholtz, Uppsala, Sweden
Bengt Westermark, Uppsala, Sweden
Timothy J. Knott, London, England
                                                                                                                                                                                                                                            Jack Singer, Seattle, WA
ASSIGNEE: Cell Therapeutics, Inc., Seattle, WA (U.S. corp.)
APPL-NO: 08/457,683
Timothy J. Knott, London, England
James Scott, Harrow, United Kingdom
Graeme I. Bell, San Francisco, CA
ASSIGNEE: Chiron Corporation, Emeryville, CA (U.S. corp.)
APPL-NO: 08/454,425
DATE FILED: May 30, 1995
ART-UNIT: 182
PRIM-EXMR: Marianne P. Allen
LEGAL-REP: Roberta L. Robins, Amy L. Collins, Robert P. Blackburn
                                                                                                                                                                                                                                           APPL-NO: 06/457,665
DATE FILED: Jun. 1, 1995
ART-UNIT: 125
PRIM-EXMR: Theodore J. Criares
LEGAL-REP: Jeffrey B. Oster
                                                                                                                                                                                                                                           US PAT NO: 5,567,584 [IMAGE AVAILABLE] L3: 19 of 93

DATE ISSUED: Oct. 22, 1996

TITLE: Methods of using biologically active dimerized polypeptide fusions to detect PDGF

INVENTOR: Andreg Z. Sledziewski, Seattle, WA

Lillian A. Bell, Seattle, WA

Wayne R. Kindsvogel, Seattle, WA

ASSIGNEE: Zymogenetics Lo. Seattle WA (LS corp.)
  US PAT NO: 5,595,722 [IMAGE AVAILABLE] L3: 13 of 93
DATE ISSUED: Jan. 21, 1997
TITLE: Method for identifying an agent which increases TGF-beta
                                                                                                                                            L3: 13 of 93
Inventor:

Inventor:

James C. Metcalfe, Cambridge, England

ASSIGNEE:

APPL-NO:

DATE FILED:

ART-UNIT:

PRIM-EXMR:

LEGAL-REP:

David J. Grainger, Cambridge, England

NeoRx Corporation, Seattle, WA (U.S. corp.)

08/476,735

Jun. 7, 1995

Raymond Henley, Iii

Schwegman, Lundberg, Woessner & Kluth, P.A.
                            levels
                                                                                                                                                                                                                                            ASSIGNEE: Zymogenetics, Inc., Seattle, WA (U.S. corp.)
APPL-NO: 08/180,195
DATE FILED: Jan. 11, 1994
ART-UNIT: 182
PRIM-EXMR: John Ulm
LEGAL-REP: Seed and Berry LLP
                                                                                                                                                                                                                                            US PAT NO: 5,565,519 [IMAGE AVAILABLE] L3: 20 of 93
DATE ISSUED: Oct. 15, 1996
TITLE: Clear, chemically modified collagen-synthetic polymer conjugates for ophthalmic applications
INVENTOR: Woonza M. Rhee, Palo Alto, CA
Prema R. Rao, Los Gatos, CA
                                                                                                                                                                                                                                                                                                                                                                                       13:20 of 93
                                                                                                                                             L3: 14 of 93
  US PAT NO: 5,591,453 [IMAGE AVAILABLE] L3: 14
DATE ISSUED: Jan. 7, 1997
TITLE: Incorporation of biologically active molecules into
  bioactive glasses
INVENTOR: Paul Ducheyne, Rosemont, PA
Shulamith Radin, Voorhees, NJ
Erick M. Santos, Philadelphia, PA
ASSIGNEE: The Trustees of the University of Pennsylvania,
                                                                                                                                                                                                                                            Prema R. Rao, Los Gatos, CA
George H. Chu, Cupertino, CA
Frank A. DeL ustro, Belmont, CA
ASSIGNEE: Collagen Corporation, Palo Alto, CA (U.S. corp.)
APPL-NO: 08/147,227
DATE FILED: Nov. 3, 1993
ART-UNIT: 153
PRIM-EXMR: Nathan M. Nutter
LEGAL-REP: Kathi Rafayko, Shirley L. Church
                           Philadelphia, PA (U.S. corp.)
  APPL-NO: 08/477,585
DATE FILED: Jun. 7, 1995
ART-UNIT: 151
PRIM-EXMR: Amy Hulina
LEGAL-REP: Woodcock Washburn Kurtz Mackiewicz & Norris
                                                                                                                                                                                                                                              US PAT NO: 5,563,173 [IMAGE AVAILABLE]
DATE ISSUED: Oct. 8, 1996
TITLE: Anti-proliferative effects of sodium butyrate
INVENTOR: Frank M. Yatsu, Houston, TX
                                                                                                                                                                                                                                                                                                                                                                                       L3: 21 of 93
    US PAT NO: 5,585,270 [IMAGE AVAILABLE]
                                                                                                                                             1.3: 15 of 93
  US PAT NO: 5,585,270 [MAGE AVAILABLE] L3: 15 of 93
DATE ISSUED: Dec. 17, 1998
TITLE: Polynucleotides encoding connective tissue growth factor INVENTOR: Gary R. Grotendorst, Lutz, FL
Douglass M. Bradham, Jr., Baltimore, MD
ASSIGNEE: University of South Florida, Tampa, FL (U.S. corp.)

08/388,680

DATE FILED: Feb. 10, 1995
ART-UNIT: 182
PRIM-EXMR: John Ulm
ASST-EXMR: Lorraine M. Spector
Fish & Richardson P.C.
                                                                                                                                                                                                                                              Kasturi Ranganna, Houston, TX
ASSIGNEE: Research Development Foundation, Carson City, NV (U.S.
                                                                                                                                                                                                                                              ASSIGNEE: Research Development Corp.)
APPL-NO: 08/362,829
DATE FILED: Dec. 22, 1994
ART-UNIT: 125
PRIM-EXMR: Marianne M. Cintins
ASST-EXMR: William R.A. Jarvis
LEGAL-REP: Benjamin Aaron Adler
                                                                                                                                                                                                                                              US PAT NO: 5,550,188 [IMAGE AVAILABLE] L3: 22 of DATE ISSUED: Aug. 27, 1996
TITLE: Polymer conjugates ophthalmic devices comprising collagen-polymer conjugates
INVENTOR: Woonza Rhee, Palo Alto, CA
Donald G. Wallace, Menlo Park, CA
                                                                                                                                                                                                                                                                                                                                                                                         13:22 of 93
     US PAT NO: 5,580,874 [IMAGE AVAILABLE]
                                                                                                                                               L3: 16 of 93
    US PAT NO: 5,500,674 [initiate AVAILABLE]
DATE ISSUED: Dec. 3, 1996
ITILE: Enatiomerically pure hydroxylated xanthine compounds
INVENTOR: James A. Bianco, Seattle, WA
Paul Woodson, Bothell, WA
David Porubek, Edmonds, WA
                                                                                                                                                                                                                                                                       Alan S. Michaels, Boston, MA
Ramon A. Burns, Jr., Fremont, CA
Louis Fries, Los Altos, CA
    Jack Singer, Seattle, WA
ASSIGNEE: Cell Therapeutics, Inc., Seattle, WA (U.S. corp.)
08/457,685
DATE FILED: Jun. 1, 1995
ART-UNIT: 125
PRIM-EXMR: Theodore J. Criares
LEGAL-REP: Stephen Faciszewski
                             Jack Singer, Seattle, WA
                                                                                                                                                                                                                                              Louis Fries, Los Altos, CA
Frank DeLustro, Belmont, CA
Hanne Bentz, Newark, CA
ASSIGNEE: Collegen Corporation, Palo Alto, CA (U.S. corp.)
APPL-NO: 08/478,510
DATE FILED: Jun. 7, 1995
ART-UNIT: 127
PRIM-EXMR: Nathan M. Nutter
LEGAL-REP: Morrison & Foerster
                                                                                                                                                L3: 17 of 93
      US PAT NO: 5,580,873 [IMAGE AVAILABLE]
      US PAT NO: 5,380,673 [IMMGE AVAILABLE]

DATE ISSUED: Dec. 3, 1998

TITLE: Enatiomerically pure hydroxylated xanthine compounds to treat proliferative vascular diseases

INVENTOR: James A. Bianco, Seattle, WA
Paul Woodson, Bothell, WA
                                                                                                                                                                                                                                                US PAT NO: 5,545,569 [IMAGE AVAILABLE]
                                                                                                                                                                                                                                                                                                                                                                                           L3: 23 of 93
                                                                                                                                                                                                                                                DATE ISSUED: Aug. 13, 1996
                                                                                                                                                                                                                                                TITLE: Prevention and treatment of pathologies associated with abnormally proliferative smooth muscle cells
                              David Porubek, Edmonds, WA
      Jack Singer, Seattle, WA
ASSIGNEE: Cell Therapeutics, Inc., Seattle, WA (U.S. corp.)
                                                                                                                                                                                                                                                                                    David J. Grainger, Cambridge, United Kingdom
                                                                                                                                                                                                                                                INVENTOR:
```

```
LEGAL-REP: Banner & Allegretti, Ltd.
                     James C. Metcalfe, Cambridge, United Kingdom
Peter L. Weissberg, Cambridge, United Kingdom
ASSIGNEE: NeoRx Corporation, Seattle, WA (U.S. corp.)
APPL-NO: 08/450,520
                                                                                                                                                                                                                    US PAT NO: 5,510,418 [IMAGE AVAILABLE] L3: 29
DATE ISSUED: Apr. 23, 1996
TITLE: Glycosaminoglycan-synthetic polymer conjugates
INVENTOR: Woonza M. Rhee, Palo Alto, CA
                                                                                                                                                                                                                                                                                                                                                   L3: 29 of 93
APPL-NO. 0443,325
DATE FILED: May 25, 1995
ART-UNIT: 125
PRIM-EXMR: Raymond Henley, III
LEGAL-REP: Schwegman, Lundberg, Woessner & Kluth, P.A.
                                                                                                                                                                                                                     Richard A. Berg, Los Altos, CA
ASSIGNEE: Collagen Corporation, Palo Alto, CA (U.S. corp.)
APPL-NO: 08/148,843
                                                                                                                                                                                                                     APPL-NO: 08748,643

DATE FILED: Nov. 3, 1993

ART-UNIT: 153

PRIM-EXMR: Nathan M. Nutter

LEGAL-REP: Kathi Rafayko, Shirley L. Church
US PAT NO: 5,543,441 [IMAGE AVAILABLE] L3: 24 (
DATE ISSUED: Aug. 6, 1998

TITLE: Implants coated with collagen-polymer conjugates
INVENTOR: Woonza Rhee, Palo Alto, CA
Donald G. Wallace, Menlo Park, CA
                                                                                                                              L3: 24 of 93
                      Alan S. Michaels, Boston, MA
Ramon A. Burns, Jr., Fremont, CA
Louis Fries, Los Altos, CA
                                                                                                                                                                                                                      US PAT NO: 5,510,121 [IMAGE AVAILABLE]
DATE ISSUED: Apr. 23, 1996
                                                                                                                                                                                                                                                                                                                                                    L3: 30 of 93
                                                                                                                                                                                                                     TITLE: Glycosaminoglycan-synthetic polymer conjugates
INVENTOR: Woonza M. Rhee, 3845 LaDonna Ave., Palo Alto, CA 94306
Richard A. Berg, 660 S. Springer Rd., Los Altos, CA 94024
APPLINO: 08/434,958
DATE FILED: May 4, 1995
                     Frank DeLustro, Belmont, CA
Hanne Bentz, Newark, CA
Hanne Bentz, Newark, CA
ASSIGNEE: Collagen Corporation, Palo Alto, CA (U.S. corp.)
APPL-NO: 08/427,576
DATE FILED: Apr. 24, 1995
ART-UNIT: 127
PRIM-EXMR: Nathan M. Nutter
LEGAL-REP: Morrison & Foerster
                                                                                                                                                                                                                      ART-UNIT: 127
PRIM-EXMR: Nathan M. Nutter
                                                                                                                                                                                                                     US PAT NO: 5,508,030 [IMAGE AVAILABLE] L3: 3
DATE ISSUED: Apr. 16, 1996
TITLE: Creating new capillary blood pools for practicing bidirectional medicine
                                                                                                                                                                                                                                                                                                                                                     L3: 31 of 93
 US PAT NO: 5,533,836 [IMAGE AVAILABLE] L3: 25 of 93
DATE ISSUED: Jul. 9, 1996
TITLE: Compositions and methods for stimulating the growth of
                                                                                                                                                                                                                       INVENTOR: Howard R. Bierman, 150 N. Robertson Blvd., Ste. 314, Beverly Hills, CA 90211
                         osteoblasts
                                   Emma E. Moore, Seattle, WA
ZymoGenetics, Inc., Seattle, WA (U.S. corp.)
 INVENTOR:
ASSIGNEE:
                                                                                                                                                                                                                       APPL-NO: 08/102,448
DATE FILED: Aug. 5, 1993
ART-UNIT: 181
PRIM-EXMR: Chhaya D. Sayala
LEGAL-REP: Albert M. Herzig
                                 08/408,331
 APPL-NO: 08/408,331
DATE FILED: Mar. 22, 1995
ART-UNIT: 181
PRIM-EXMR: Howard E. Schain
LEGAL-REP: Deborah A. Sawislak
                                                                                                                                                                                                                       US PAT NO: 5,504,103 [IMAGE AVAILABLE]
DATE ISSUED: Apr. 2, 1996
 US PAT NO: 5,523,348 [IMAGE AVAILABLE]
DATE ISSUED: Jun. 4, 1996
                                                                                                                               L3: 26 of 93
                                                                                                                                                                                                                       TITLE: Inhibition of phosphatidylinositol 3-kinase with 17 beta-hydroxywortmannin and analogs thereof INVENTOR: Rosanne Bonjouklian, Zionsville, IN
 INVENTOR: Woonza Rhee, Palo Alto, CA
Donald G. Wallace, Menio Park, CA
                                                                                                                                                                                                                       INVENTOR: Rosanne Bonjoukilan, Zonsville, IN
Jeffrey A. Dodge, Indianapolis, IN
Chris J. Vlahos, Carmel, IN
ASSIGNEE: Eli Lilly and Company, Indianapolis, IN (U.S. corp.)
APPL-NO: 08/111,687
DATE FILED: Aug. 25, 1993
ART-UNIT: 129
PRIM-EXMR: ALIEN J. Robinson
Deborah Lambkin
LEGALJEPP: Roger S. Benjamin Steven A. Fontana, David E. Br.
                       Alan S. Michaels, Boston, MA
Ramon A. Burns, Jr., Fremont, CA
                       Louis Fries, Los Altos, CA
                      Frank DeLustro, Belmont, CA
Hanne Bentz, Newark, CA
  Hanne Bentz, Newark, CA
ASSIGNEE: Collagen Corporation, Palo Alto, CA (U.S. corp.)
APPL-NO: 08/29/2,415
DATE FILED: Aug. 18, 1994
ART-UNIT: 127
PRIM-EXMR: Nathan M. Nutter
LEGAL-REP: Morrison & Foerster
                                                                                                                                                                                                                        LEGAL-REP: Roger S. Benjamin, Steven A. Fontana, David E. Boone
                                                                                                                                                                                                                      US PAT NO: 5,480,906 [IMAGE AVAILABLE] L3: 33 of 93
DATE ISSUED: Jan. 2, 1996
TITLE: Stereochemical Wortmannin derivatives
INVENTOR: Lawrence C. Creemer, Indianapolis, IN
Herbert A. Kirst, Indianapolis, IN
ASSIGNEE: Eli Lilly and Company, Indianapolis, IN (U.S. corp.)
APPL-NO: 08/269,716
DATE FILED: Jul. 1, 1994
ART-UNIT: 123
PRIM-EXMR: C. Warren by
ASST-EXMR: C. Warren by
Ba K. Trinh
LEGAL-REP: Thomas J. Dodd, David E. Boone
  US PAT NO: 5,521,315 [IMAGE AVAILABLE]
DATE ISSUED: May 28, 1996
ITILE: Olefin substituted long chain compounds
INVENTOR: Gail Underiner, Brier, WA
David Porubek, Seattle, WA
J, Peter Klein, Vashon, WA
                                                                                                                                 1.3: 27 of 93
                       Elisa Eiseman, Seattle, WA
Alistair Leigh, Brier, WA
Anil Kumar, Seattle, WA
   John Michnick, Seattle, WA
ASSIGNEE: Cell Therapeutics, Inc., Seattle, WA (U.S. corp.)
APPL-NO: 08/059,697
                                                                                                                                                                                                                       US PAT NO: 5,476,666 [IMAGE AVAILABLE] L3: 34 of DATE ISSUED: Dec. 19, 1995

TITLE: Glycosaminoglycan-synthetic polymer conjugates INVENTOR: Woonza M. Rhee, Palo Alto, CA
Richard A. Berg, Los Altos, CA

ASSIGNEE: Collagen Corporation, Palo Alto, CA (U.S. corp.)

APPL-NO: 08/434,725

DATE FILED: May 4, 1995

ART-UNIT: 127

PRIM-EXMR: Nathan M. Nutter

LEGAL-REP: Kathi Rafayko
                                                                                                                                                                                                                                                                                                                                                      L3: 34 of 93
   APPL-NO: Outbos.057
DATE FILED: May 10, 1993
ART-UNIT: 122
PRIM-EXMR: Mukund J. Shah
ASST-EXMR: Pavanaram K. Sripada
LEGAL-REP: Stephen Faciszewski, Jeffrey B. Oster
   US PAT NO: 5,512,545 [IMAGE AVAILABLE]
DATE ISSUED: Apr. 30, 1996
ITTLE: PDGF-B analogues
INVENTOR: David Brown, Canterbury, England
Richard M. Edwards, Oxford, England
                                                                                                                                 L3: 28 of 93
                                                                                                                                                                                                                         US PAT NO: 5,475,052 [IMAGE AVAILABLE]
DATE ISSUED: Dec. 12, 1995
                         Stewart Craig, Oxford, England
Anne L. Cook, Oxford, England
John M. Clements, Oxford, England
                                                                                                                                                                                                                                                   Collagen-synthetic polymer matrices prepared using a
    ASSIGNEE: British Biotech Pharmaceuticals Limited, both of, United Kingdom (foreign corp.)
Pfizer Limited, both of, United Kingdom (foreign corp.)
                                                                                                                                                                                                                         multiple step reaction
INVENTOR: Woonza M. Rhee, Palo Alto, CA
                                                                                                                                                                                                                         Richard A. Berg, Los Altos, CA
ASSIGNEE: Collagen Corporation, Palo Alto, CA (U.S. corp.)
APPL-NO: 08/236,769
    APPL-NO: 08/094,079
DATE FILED: Aug. 31, 1993
ART-UNIT: 182
PRIM-EXMR: Marianne P. Allen
                                                                                                                                                                                                                         DATE FILED: May 2, 1994
ART-UNIT: 127
```

PRIM-EXMR: Nathan M. Nutter LEGAL-REP: Kathi Rafayko US PAT NO: 5,474,982 [IMAGE AVAILABLE]
DATE ISSUED: Dec. 12, 1995
TITLE: PDGF analogs and methods of use
INVENTOR: Mark J. Murray, Seattle, WA L3: 36 of 93 James D. Kelly, Seattle, WA
ASSIGNEE: ZymoGenetics, Inc., Seattle, WA (U.S. corp.)
APPL-NO: 08/273,779 APPL-NOI: 00/273,779
DATE FILED: Jul. 12, 1994
ART-UNIT: 181
PRIM-EXMR: Jill Warden
ASST-EXMR: Benet Prickril
LEGAL-REP: Seed and Berry US PAT NO: 5,473,070 [IMAGE AVAILABLE] L3: 37 of DATE ISSUED: Dec. 5, 1995
TITLE: Substituted long chain alcohol xanthine compounds INVENTOR: Gail Underiner, Brier, WA
David Porubek, Edmonds, WA L3: 37 of 93 Javid Portubek, Edmonts, WA

J. Peter Klein, Vashon Island, WA
Paul Woodson, Bothell, WA

ASSIGNEE: Cell Therapeutics, Inc., Seattle, WA (U.S. corp.)

APPL-NO: 07/976,353 DATE FILED: Nov. 16, 1992
ART-UNIT: 122
PRIM-EXMR: Mukund J. Shah
ASST-EXMR: P. K. Sripada
LEGAL-REP: Stephen Faciszewski, Jeffrey B. Oster US PAT NO: 5,470,911 [IMAGE AVAILABLE] L3: 38 of DATE ISSUED: Nov. 28, 1995

TITLE: Glycosaminoglycan-synthetic polymer conjugates INVENTOR: Woonza M. Rhee, Palo Alto, CA RISIGNEE: Collagen Corporation, Palo Alto, CA (U.S. corp.)

APPL-NO: 08/433,656

APPL-NO: 08/433,656 L3: 38 of 93 APTL-NU: 00/433,000
DATE FILED: May 4, 1995
ART-UNIT: 127
PRIM-EXMR: Nathan M. Nutter
LEGAL-REP: Kathi Rafayko US PAT NO: 5,470,878 [IMAGE AVAILABLE] DATE ISSUED: Nov. 28, 1995 L3: 39 of 93 DATE ISSUEJ. Nov. 20, 1999
ITILE: Cell signaling inhibitors
INVENTOR: John Michnick, Seattle, WA
Gail E. Underiner, Brier, WA
J. Peter Klein, Vashon Island, WA
Glenn C. Rice, Seattle, WA Glenn C. Rice, Seattle, WA
ASSIGNEE: Cell Therapeutics, Inc., Seattle, WA (U.S. corp.)
08/164,081
DATE FILED: Dec. 8, 1993
ART-UNIT: 129
PRIM-EXMR: Shailendra Kumar
LEGAL-REP: Stephen Faciszewski, Jeffrey B. Oster US PAT NO: 5,468,468 [IMAGE AVAILABLE] L3: 40 of 93
DATE ISSUED: Nov. 21, 1995
TITLE: Method for making a monoclonal antibody, monoclonal antibodies to .alpha. PD
INVENTOR: William J. LaRochelle, Gaithersburg, MD
Jacalyn Pierce, Potomac, MD
Roy A. Jensen, Franklin, TN
Shurd A. Aspreson, Great Falls, VA Stuart A. Aaronson, Great Falls, VA
ASSIGNEE: The United States of America, as represented by the Secretary of the Department of Health & Human Services, Washington, DC (U.S. govt.)
APPL-NO: 08/081,216
DATE FILED: Jun. 25, 1993
ART-UNIT: 186
PRIM-EXMR: David L. Lacey
ASST-EXMR: Susan A. Loring LEGAL-REP: Foley & Lardner US PAT NO: 5,457,093 [IMAGE AVAILABLE] 13:41 of 93 DATE ISSUED: Oct. 10, 1995

ITTLE: Gel formulations containing growth factors
INVENTOR: John K. Cini, Bethlehem, PA Amy L. Finkenaur, Neshanic Station, NJ
ASSIGNEE: Ethicon, Inc., Somerville, NJ (U.S. corp.)
APPL-NO: 08/135,230

DATE FILED: Oct. 12, 1993
ART-UNIT: 181
PRIM-EXMR: Howard E. Schain
ASST-EXMR: Sheela J. Huff

US PAT NO: 5,455,041 [IMAGE AVAILABLE] L3: 42 of 93
DATE ISSUED: Oct. 3, 1995
TITLE: Method for inducing periodontal tissue regeneration
INVENTOR: Robert J. Genco, Buffalo, NY
Moon-II Cho, Amherst, NY
ASSIGNEE: Research Foundation of State University of New York at
Buffalo, Buffalo, NY (U.S. corp.)
APPL-NO: 08/121,041
DATE FILED: Sep. 13, 1993
ART-UNIT: 152
PRIM-EXMR: Thurman K. Page
ASST-EXMR: Carlos Azpuru
LEGAL-REP: Hodgson, Russ, Andrews, Woods & Goodyear US PAT NO: 5,448,091 [IMAGE AVAILABLE] L3: 43 of 93
DATE ISSUED: Aug. 29, 1995
TITLE: Collagen-polymer conjugates containing an ether linkage
INVENTOR: Woonza Rhee, Palo Alto, CA
Donald G. Wallace, Menlo Park, CA
Alan S. Michaels, Boston, MA
Ramon A. Burns, Jr., Fremont, CA
Louis Fries, Los Altos, CA
Frank Del.ustro, Belmont, CA
Hanne Bentz, Newark, CA Hanne Bentz, Newark, CA
ASSIGNEE: Collagen Corporation, Palo Alto, CA (U.S. corp.)
APPL-NO: 08/368,874 DATE FILED: Jan. 5, 1995
ART-UNIT: 153
PRIM-EXMR: Nathan M. Nutter
LEGAL-REP: Morrison & Foerster US PAT NO: 5,444,151 [IMAGE AVAILABLE] L3
DATE ISSUED: Aug. 22, 1995
TITLE: Platelet derived growth factor antagonists
INVENTOR: Flemming S. Vassbotn, Uppsala, Sweden
Maria Andersson, Uppsala, Sweden Gudrun Backstrom, Uppsala, Sweden Ulla Engstrom, Uppsala, Sweden Carl-Henrik Heldin, Uppsala, Sweden Ulf Hellman, Uppsala, Sweden
Arne stman, Uppsala, Sweden
Bengt Westermark, Uppsala, Sweden
ASSIGNEE: Ludwig Institute for Cancer Research, New York, NY (U.S. corp.)
APPL-NO: 07/977,234
DATE FILED: Nov. 16, 1992
ART-UNIT: 182
PRIM-EXMR: Garnette D. Draper ASST-EXMR: Marianne Allen LEGAL-REP: Felfe & Lynch US PAT NO: 5,440,041 [IMAGE AVAILABLE] L3: 45 of DATE ISSUED: Aug. 8, 1995

TITLE: Acetal or ketal substituted xanthine compounds INVENTOR: Alistair Leigh, Edmonds, WA

ASSIGNEE: Cell Therapeutics, Inc., Seattle, WA (U.S. corp.)

APPL-NO: 08/194,135

DATE EIL ED: E-ba 8, 1994 L3: 45 of 93 DATE FILED: Feb. 8, 1994
ART-UNIT: 122
PRIM-EXMR: Mukund J. Shah
ASST-EXMR: Pavanaram K. Sripada
LEGAL-REP: Stephen Faciszewski, Jeffrey B. Oster US PAT NO: 5,428,135 [IMAGE AVAILABLE] DATE ISSUED: Jun. 27, 1995 L3: 46 of 93 DATE ISSUED: Jun. 27, 1995

ITTLE: Production of platelet-derived growth factor 8-chain heterodimers from high expression host cell system INVENTOR: David E. Lyons, Thousand Oaks, CA ARSIGNEE: Amgen Inc., Thousand Oaks, CA (U.S. corp.)

APPL-NO: 08/236,880

ATE ELI ED: Arr. 29, 1904 APPLINO: 08/230,880
DATE FILED: Apr. 29, 1994
ART-UNIT: 182
PRIM-EXMR: Marianne Porta Allen
LEGAL-REP: Julia E. Abers US PAT NO: 5,428,010 [IMAGE AVAILABLE]
DATE ISSUED: Jun. 27, 1995
TITLE: Biologically active B-chain homodimers
INVENTOR: Mark J. Murray, Seattle, WA L3: 47 of 93 Mark J. mulray, Sealure, WA

Mark S. Mulray, Sealure, WA

ASSIGNEE: Appl.-No: O7/852,905

DATE FILED: Mar. 18, 1992

ART-UNIT: 182

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Hanne Bentz, Newark, CA
PRIM-EXMR: Garnette D. Draper
ASST-EXMR: Shelly Guest Cermak
                                                                                                                                                                                                                                 ASSIGNEE: Collagen Corporation, Palo Alto, CA (U.S. corp.)
APPL-NO: 08/177,578
DATE FILED: Jan. 5, 1994
ART-UNIT: 153
PRIM-EXMR: Nathan M. Nutter
LEGAL-REP: Morrison & Foerster
  LEGAL-REP:
                                  Seed and Berry
 US PAT NO: 5,418,222 [IMAGE AVAILABLE] L3: 48 of 9: DATE ISSUED: May 23, 1995

ITTLE: Multi-layered collagen film compositions for delivery of
                                                                                                                                     L3: 48 of 93
proteins and methods of using same
INVENTOR: Suk-Zu Song, Moorpark, CA
Andrew Morawiecki, Camarillo, CA
Glenn F. Pierce, Thousand Oaks, CA
Colin G. Pitt, Westlake Village, CA
                                                                                                                                                                                                                                 US PAT NO: 5,371,205 [IMAGE AVAILABLE]
DATE ISSUED: Dec. 6, 1994
TITLE: PDGF alpha, receptor
INVENTOR: James D. Kelly, Seattle, WA
                                                                                                                                                                                                                                                                                                                                                                      L3: 54 of 93
                                                                                                                                                                                                                                  Mark J. Murray, Seattle, WA
ASSIGNEE: ZymoGenetics, Inc., Seattle, WA (U.S. corp.)
APPL-NO: 07/947,358
 ASSIGNEE: Amgen Inc., Thousand Oaks, CA (U.S. corp.)
APPL-NO: 08/267,647
APPL-NO: 08/26/,047
DATE FILED: Jun. 28, 1994
ART-UNIT: 185
PRIM-EXMR: Michael G. Wityshyn
ASST-EXMR: Nancy J. Gromet-Degen
LEGAL-REP: Daniel M. Chambers, Daniel R. Curry
                                                                                                                                                                                                                                 AFT-I-NO: U/R947,336
DATE FILED: Sep. 18, 1992
ART-I-UNIT: 187
PRIM-EXMR: Mindy B. Fleisher
LEGAL-REP: Seed and Berry
                                                                                                                                                                                                                                US PAT NO: 5,354,758 [IMAGE AVAILABLE] L3: 55 of DATE ISSUED: Oct. 11, 1994
ITITLE: Olefin-substituted long chain xanthine compounds
INVENTOR: Gail Underiner, Brier, WA
David Porubek, Edmonds, WA
J. Peter Klein, Vashon Island, WA
ASSIGNEE: Cell Therapeutics, Inc., Seattle, WA (U.S. corp.)
APPL-NO: 08/003,372
DATE FILED: Jan. 12, 1993
ART-UNIT: 122
PRIM-EXMR: John M. Ford
ASST-EXMR: Pavanaram K. Sripada
US PAT NO: 5,418,135 [IMAGE AVAILABLE] L3: 49 of 93

DATE ISSUED: May 23, 1995

TITLE: Method of inhibiting binding of PDGF to a PDGF receptor by biosynthetic PDGF antagonists

INVENTOR: Roy H. L. Pang, Medway, MA

ASSIGNEE: APPL-NO: 08/095,898

DATE ELIED: 18/12/4, 1002
                                                                                                                                                                                                                                                                                                                                                                       L3: 55 of 93
  APPL-NO: Darte FileD: Jul. 21, 1993
ART-UNIT: 182
PRIM-EXMR: Garnette D. Draper
ASST-EXMR: Gian P. Wang
LEGAL-REP: Testa, Hurwitz & Thibeault
                                                                                                                                                                                                                                   LEGAL-REP: Jeffrey B. Oster, Stephen Faciszewski
 US PAT NO: 5,413,791 [IMAGE AVAILABLE]
DATE ISSUED: May 9, 1995
TITLE: Collagen-polymer conjugates
INVENTOR: Woonza Rhee, Palo Alto, CA
Donald G. Wallace, Menlo Park, CA
                                                                                                                                      L3: 50 of 93
                                                                                                                                                                                                                                   US PAT NO: 5,340,813 [IMAGE AVAILABLE] L
DATE ISSUED: Aug. 23, 1994
TITLE: Substituted aminoalkyl xanthine compounds
INVENTOR: J. Peter Klein, Vashon, WA
Gail Underiner, Bothell, WA
                                                                                                                                                                                                                                                                                                                                                                       L3: 56 of 93
                        Alan S. Michaels, Boston, MA
Alan S. Michaels, Boston, MA
Ramon A. Burns, Jr., Fremont, CA
Louis Fries, Los Altos, CA
Frank DeLustro, Belmont, CA
Hanne Bentz, Newark, CA
                                                                                                                                                                                                                                                         Alistair Leigh, Edmonds, WA
                                                                                                                                                                                                                                   ASSIGNEE: Cell Therapeutics, Inc., Seattle, WA (U.S. corp.)
APPL-NO: 07/973,804
                                                                                                                                                                                                                                   APPL-NO: 0/79/73,804

DATE FILED: Nov. 9, 1992

ART-UNIT: 122

PRIM-EXMR: Mukund J. Shah

ASST-EXMR: P. K. Sripada

LEGAL-REP: Jeffrey B. Oster
  ASSIGNEE Collagen Corporation, Palo Alto, CA (U.S. corp.)
APPL-NO: 08/198,128
DATE FILED: Feb. 17, 1994
ART-UNIT: 153
PRIM-EXMR: Nathan M. Nutter
LEGAL-REP: Morrison & Foerster
                                                                                                                                                                                                                                    US PAT NO: 5,334,532 [IMAGE AVAILABLE]
  US PAT NO: 5,408,040 [IMAGE AVAILABLE]
DATE ISSUED: Apr. 18, 1995
ITILE: Connective tissue growth factor(CTGF)
INVENTOR: Gary R. Grotendorst, Lutz, FL
                                                                                                                                                                                                                                   DATE ISSUED: Aug. 2, 1994

TITLE: PDGF-B fusion protein, vectors, and host cells for use in
                                                                                                                                       L3: 51 of 93
                                                                                                                                                                                                                                   production thereof
INVENTOR: Charles Tackney, Brooklyn, NY
                                                                                                                                                                                                                                                         Jurgen Hoppe, Wurzburg, Federal Republic of Germany
Wolfram Eichner, Braunschweig, Federal Republic of Germany
Herbert Weich, Braunschweig, Federal Republic of Germany
   Douglas M. Bradham, Jr., Baltimore, MD
ASSIGNEE: University of South Florida, Tampa, FL (U.S. corp.)
APPL-NO: 08/167,628
                                                                                                                                                                                                                                    ASSIGNEE: ImClone Systems Incorporated, New York, NY (U.S. corp.)
APPL-NO: 07/675,885
  APPL-NO: 06/16/,026
DATE FILED: Dec. 14, 1993
ART-UNIT: 182
PRIM-EXMR: Garnette D. Draper
ASST-EXMR: Lorraine M. Spector
                                                                                                                                                                                                                                   APPL-NO: 0/16/5,885
DATE FILED: Jun. 4, 1991
ART-UNIT: 182
PRIM-EXMR: Robert J. Hill, Jr.
ASST-EXMR: Marianne Porta Allen
LEGAL-REP: Irving N. Feit, Eric J. Sheets
 US PAT NO: 5,378,725 [IMAGE AVAILABLE] L3: 52 of 93

DATE ISSUED: Jan. 3, 1995

TITLE: Inhibition of phosphatidylinositol 3-kinase with wortmannin and analogs thereof

INVENTOR: Rosanne Bonjouklian, Zionsville, IN Chris J. Vlahos, Carmel, IN Garth Powis, Tucson, AZ

ASSIGNEE: The Arizona Board of Regents, Tucson, AZ (U.S. corp.)

Eli Lilly and Company, Indianapolis, IN (U.S. corp.)

APPL-NO: 08/094,279

DATE FILED: Jul. 19, 1993

ART-UNIT: 125

PRIM-EXMR: Raymond J. Henley, III

LEGAL-REP: Steven A. Fontana, David E. Boone
                                                                                                                                                                                                                                   US PAT NO: 5,328,955 [IMAGE AVAILABLE]
DATE ISSUED: Jul. 12, 1994
TITLE: Collagen-polymer conjugates
INVENTOR: Woonza Rhee, Palo Alto, CA
Donald G. Wallace, Menio Park, CA
                                                                                                                                                                                                                                                                                                                                                                         1.3: 58 of 93
                                                                                                                                                                                                                                                          Alan S. Michaels, Boston, MA
Ramon A. Burns, Jr., Fremont, CA
Louis Fries, Los Altos, CA
                                                                                                                                                                                                                                                          Frank DeLustro, Belmont, CA
Hanne Bentz, Newark, CA
                                                                                                                                                                                                                                    Hanne Bentz, Newark, CA
ASSIGNEE: Collagen Corporation, Palo Alto, CA (U.S. corp.)
07/822,541
DATE FILED: Jul. 30, 1992
ART-UNIT: 153
PRIM-EXMR: Nathan M. Nutter
LEGAL-REP: Karl Boxicevic
    US PAT NO: 5,376,375 [IMAGE AVAILABLE]
DATE ISSUED: Dec. 27, 1994
                                                                                                                                        L3: 53 of 93
                            Method of augmenting tissue using collagen-polymer
    conjugates
INVENTOR: Woonza Rhee, Palo Alto, CA
Donald G. Wallace, Menlo Park, CA
Alan S. Michaels, Boston, MA
                                                                                                                                                                                                                                      US PAT NO: 5,326,695 [IMAGE AVAILABLE]
                                                                                                                                                                                                                                                                                                                                                                          L3: 59 of 93
                                                                                                                                                                                                                                      DATE ISSUED: Jul. 5, 1994
                                                                                                                                                                                                                                     TITLE: Platelet derived growth factor agonists INVENTOR: Maria Andersson, Uppsala, Sweden
                          Ramon A. Burns, Jr., Fremont, CA
Louis Fries, Los Altos, CA
                                                                                                                                                                                                                                                            Gudrun Backstrom, Uppsala, Sweden
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Frank DeLustro, Belmont, CA

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DATE FILED: Dec. 2, 1992
ART-UNIT: 153
PRIM-EXMR: Nathan M. N
                   Ulla Engstrom, Uppsala, Sweden
Carl-Henrik Heldin, Uppsala, Sweden
                                                                                                                                                                                                                                                Nathan M. Nutter
                    Ulf Hellman, Uppsala, Sweden
Arne stman, Uppsala, Sweden
Bengt Westermark, Uppsala, Sweden
                                                                                                                                                                                                                 I FGAL-REP: Karl Bozicevic
                               Ludwig Institute for Cancer Research, New York, NY (U.S.
                                                                                                                                                                                                               US PAT NO: 5,292,656 [IMAGE AVAILABLE]
DATE ISSUED: Mar. 8, 1994
TITLE: Rat osteosarcoma cell line OSR-6
INVENTOR: Claus-Jens W. Doersen, Cincinnati, OH
ASSIGNEE:
                                                                                                                                                                                                                                                                                                                                           L3: 65 of 93
                     согр.)
corp.)

APPL-NO: 07/883,949

DATE FILED: May 15, 1992

ART-UNIT: 182

PRIM-EXMR: Robert J. Hill, Jr.

ASST-EXMR: Marianne Porta Allen

LEGAL-REP: Felfe & Lynch
                                                                                                                                                                                                                 Robert J. Isfort, Cincinnati, OH
ASSIGNEE: The Procter & Gamble Company, Cincinnati, OH (U.S. corp.)
APPL-NO: 07/903,435
                                                                                                                                                                                                                DATE FILED: Jun. 24, 1992
ART-JNIT: 182
PRIM-EXMR: Robert J. Hill, Jr.
ASST-EXMR: Sally P. Teng
LEGAL-REP: Brahm J. Corstanje, Milton B. Graff, IV, David L. Suter
US PAT NO: 5,324,775 [IMAGE AVAILABLE] L3: 60 of DATE ISSUED: Jun. 28, 1994

TITLE: Biologically inert, biocompatible-polymer conjugates INVENTOR: Woonza Rhee, Palo Alto, CA

Donald G. Wallace, Menlo Park, CA

Alan S. Michaels, Boston, MA
                                                                                                                            L3: 60 of 93
                                                                                                                                                                                                               US PAT NO: 5,288,628 [IMAGE AVAILABLE] L3: 66 of 93

DATE ISSUED: Feb. 22, 1994

TITLE: Rat osteosarcoma cell line OSR4TR1

INVENTOR: Claus-Jens W. Doersen, Cincinnati, OH

Robert J. Isfort, Cincinnati, OH

ASSIGNEE: The Procter & Gamble Company, Cincinnati, OH (U.S. corp.)

APPL-NO: 07/803,436
                     Ramon A. Burns, Jr., Fremont, CA
Louis Fries, Los Altos, CA
Frank DeLustro, Belmont, CA
Hanne Bentz, Newark, CA
ASSIGNEE: Collagen Corporation, Palo Alto, CA (U.S. corp.)
APPL-NO: 07/907,518
                                                                                                                                                                                                                 ASSIGNEE: 10 Proceeds a Gammine Company, Chicago, SA APPL-NO. 07/803,436
DATE FILED: Jun. 24, 1992
ART-UNIT: 182
PRIM-EXMR: Robert J. Hill, Jr.
ASST-EXMR: Sally Teng
LEGAL-REP: Braham J. Corstanje, Milton B. Graff, IV, David L. Suter
DATE FILED: Jul. 2, 1992
ART-UNIT: 153
PRIM-EXMR: Nathan M. Nutter
LEGAL-REP: Karl Bozicevic
US PAT NO: 5,308,889 [IMAGE AVAILABLE]
DATE ISSUED: May 3, 1994
TITLE: Dehydrated collagen-polymer strings
INVENTOR: Woonza Rhee, Pal Alto, CA
Louis Fries, Los Altos, CA
                                                                                                                                                                                                                US PAT NO: 5,286,645 [IMAGE AVAILABLE] L3: 67 of 93

DATE ISSUED: Feb. 15, 1994

TITLE: Rat osteosarcoma cell line osr3tr1

INVENTOR: Claus-Jens W. Doersen, Cincinnati, OH

ASSIGNEE: The Procter & Gamble Company, Cincinnati, OH (U.S. corp.)

APPL-NO: 07/903,434

DATE ELED: Inc. 24, 1992
Ramesh Damani, Mountain View, CA
Kimberly McCullough, Hayward, CA
Frank DeLustro, Belmont, CA
ASSIGNEE: Collagen Corporation, Palo Alto, CA (U.S. corp.)
APPL-NO: 07/884,197
                                                                                                                                                                                                                  DATE FILED: Jun. 24, 1992
ART-UNIT: 182
PRIM-EXMR: Robert J. Hill, Jr.
 APPL-NO: 0//984,197
DATE FILED: Dec. 2, 1992
ART-UNIT: 153
PRIM-EXMR: Nathan M. Nutter
LEGAL-REP: Karl Bozicevic
                                                                                                                                                                                                                  ASST-EXMR: Sally Teng
LEGAL-REP: Brahm J. Corstanje, Milton B. Graff, IV, David L. Suter
                                                                                                                                                                                                                  US PAT NO: 5,286,644 [IMAGE AVAILABLE]
DATE ISSUED: Feb. 15, 1994
                                                                                                                                                                                                                                                                                                                                              L3: 68 of 93
 US PAT NO: 5,306,500 [IMAGE AVAILABLE] L3: 62 of DATE ISSUED: Apr. 26, 1994
TITLE: Method of augmenting tissue with collagen-polymer
                                                                                                                             L3: 62 of 93
                                                                                                                                                                                                                  ITILE: Rat osteosarcoma cell line OSR-2
INVENTOR: Claus-Jens W. Doersen, Cincinnati, OH
Robert J. Isfort, Cincinnati, OH
                        conjugates
                                                                                                                                                                                                                  ASSIGNEE: The Procter & Gamble Company, Cincinnati, OH (U.S. corp.)
APPL-NO: 07/903,432
 INVENTOR: Woonza Rhee, Palo Alto, CA
Donald G. Wallace, Menlo Park, CA
                                                                                                                                                                                                                  APPL-NO: U7/903,432
DATE FILED: Jun. 24, 1992
ART-UNIT: 182
PRIM-EXMR: Robert J. Hill, Jr.
ASST-EXMR: Sally P. Teng
LEGAL-REP: Brahm J. Corstanje, Milton B. Graff IV, David L. Suter
                      Alan S. Michaels, Boston, MA
Ramon A. Burns, Jr., Fremont, CA
Louis Fries, Los Altos, CA
                      Frank DeLustro, Belmont, CA
Hanne Bentz, Newark, CA
 Hanne Bentz, Newark, CA
ASSIGNEE: Collagen Corporation, Palo Alto, CA (U.S. corp.)
08/110,577
DATE FILED: Aug. 23, 1993
ART-UNIT: 153
PRIM-EXMR: Nathan M. Nutter
LEGAL-REP: Morrison & Foerster
                                                                                                                                                                                                                  US PAT NO: 5,286,643 [IMAGE AVAILABLE]
DATE ISSUED: Feb. 15, 1994
                                                                                                                                                                                                                                                                                                                                              L3: 69 of 93
                                                                                                                                                                                                                  TITLE: Rat osteosarcoma cell line OSR-8
INVENTOR: Claus-Jens W. Doersen, Cincinnati, OH
                                                                                                                                                                                                                                     Robert J. Isfort, Cincinnati, OH
                                                                                                                                                                                                                  ASSIGNEE The Procter & Gamble Company, Cincinnati, OH (U.S. corp.)
APPL-NO: 07/903,431
  US PAT NO: 5,304,595 [IMAGE AVAILABLE]
DATE ISSUED: Apr. 19, 1994
                                                                                                                              L3: 63 of 93
                                                                                                                                                                                                                  DATE FILED: Jun. 24, 1992
ART-JNIT: 182
PRIM-EXMR: Robert J. Hill, Jr.
ASST-EXMR: Sally P. Teng
LEGAL-REP: Brahm J. Corstanje, Milton B. Graff, IV, David L. Suter
 DATE ISSUED: Apr. 19, 1994
TITLE: Collagen-polymer conjugates
INVENTOR: Woonza Rhee, Palo Alto, CA
Donald G. Wallace, Menlo Park, CA
Alan S. Michaels, Boston, MA
Ramon A. Burns, Jr., Fremont, CA
Louis Fries, Los Altos, CA
Frank DeLustro, Belmont, CA
Hanne Bentz, Newark, CA
ASSICNEE: Collagen Corroration, Palo Alt
                                                                                                                                                                                                                 US PAT NO: 5,288,642 [IMAGE AVAILABLE] L3: 70 of 93

DATE ISSUED: Feb. 15, 1994

TITLE: Rat osteosarcoma cell line OSR5TR2

INVENTOR: Claus-Jens W. Doersen, Cincinnati, OH

Robert J. Isfort, Cincinnati, OH

ASSIGNEE: The Procter & Gamble Company, Cincinnati, OH (U.S. corp.)

APPL-NO: 07/903,429

DATE FILED: Jun. 24, 1992

ART-UNIT: 182

PRIM-EXMR: Robert J. Hill, Jr.

ASST-EXMR: Sally P. Tenn
   ASSIGNEE: Collagen Corporation, Palo Alto, CA (U.S. corp.)
  ASSIGNEE: Collager Corporation
APPL-NO: 07/998,802
DATE FILED: Dec. 30, 1992
ART-UNIT: 153
PRIM-EXMR: Nathan M. Nutter
LEGAL-REP: Karl Bozicovic
                                                                                                                                                                                                                   PRIM-EXMR: Robert J. Hill, Jr. ASST-EXMR: Sally P. Teng
                                                                                                                              L3: 64 of 93
   US PAT NO: 5,292,802 [IMAGE AVAILABLE]
   DATE ISSUED: Mar. 8, 1994
 TITLE: Collagen-polymer tubes for use in vascular surgery
INVENTOR: Woonza Rhee, Palo Alto, CA
Kimberty McCullough, Hayward, CA
ASSIGNEE: Collagen Corporation, Palo Alto, CA (U.S. corp.)
APPL-NO: 07/985,680
                                                                                                                                                                                                                   LEGAL-REP: Brahm J. Corstanje, Milton B. Graff, IV, David L. Suter
                                                                                                                                                                                                                    US PAT NO: 5,272,084 [IMAGE AVAILABLE]
DATE ISSUED: Dec. 21, 1993
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ART-UNIT: 182
PRIM-EXMR: Robert J. Hill, Jr.
ASST-EXMR: Marianne Porta Allen
LEGAL-REP: Peter R. Shearer
                  DNA molecules encoding platelet-derived growth factor B chain analogs and method for expression thereof R: Arlen R. Thornason, Thousand Oaks, CA
TITLE:
INVENTOR:
ASSIGNEE:
                            Amgen Inc., Thousand Oaks, CA (U.S. corp.)
ASSIGNE: Angeritic, Thousand
APPL-NO: 07/624,451
DATE FILED: Dec. 13, 1990
ART-UNIT: 182
PRIM-EXMR: Robert J. Hill, Jr.
ASST-EXMR: Shelly Guest Cermak
LEGAL-REP: Julia E. Abers
                                                                                                                                                                            US PAT NO: 5,219,576 [IMAGE AVAILABLE]
DATE ISSUED: Jun. 15, 1993
                                                                                                                                                                                                                                                                                   L3: 77 of 93
                                                                                                                                                                                                 Collagen wound healing matrices and process for their
                                                                                                                                                                                                production
                                                                                                                                                                             INVENTOR: George H. Chu, Sunnyvale, CA
Yasushi Ogawa, Pacifica, CA
John M. McPherson, Hopkinton, MA
US PAT NO: 5,264,358 [IMAGE AVAILABLE]
DATE ISSUED: Nov. 23, 1993
                                                                                                       L3: 72 of 93
                                                                                                                                                                                              George Ksander, Redwood City, CA
Bruce Pratt, Union City, CA
 ITTLE: Rat osteosarcoma cell line OSR9TR1
INVENTOR: Claus-Jens W. Doersen, Cincinnati, OH
Robert J. Isfort, Cincinnati, OH
                                                                                                                                                                                              Diana Hendricks, Brea, CA
                                                                                                                                                                             Hugh McMullin, San Bruno, CA
ASSIGNEE: Collagen Corporation, Palo Alto, CA (U.S. corp.)
APPL-NO: 07/801,732
Robert J. Istort, Cincinnati, OH
ASSIGNEE: The Procter & Gamble Company, Cincinnati, OH (U.S. corp.)
APPL-NO: 07/804,107
DATE FILED: Jun. 24, 1992
ART-UNIT: 187
PRIM-EXMR: Margaret Moskowitz Parr
ASST-FXMR: Carla Myers
                                                                                                                                                                             DATE FILED: Dec. 3, 1991
ART-UNIT: 152
PRIM-EXMR: Thurman K. Page
                                                                                                                                                                              ASST-EXMR: G. S. Kishore
LEGAL-REP: Marrison & For
  ASST-EXMR:
                              Carla Myers
                                                                                                                                                                                                         Morrison & Foerster
 LEGAL-REP: Braham J. Corstanje, Milton B. Graff, IV, Jerry J. Yetter
                                                                                                                                                                              US PAT NO: 5,194,596 [IMAGE AVAILABLE] L3: 78 of DATE ISSUED: Mar. 16, 1993

TITLE: Production of vascular endothelial cell growth factor INVENTOR: Edmund G. Tischer, Palo Alto Judith A. Abraham, Sunnyvale

John C. Fiddes, Palo Alto
                                                                                                                                                                                                                                                                                    13:78 of 93
 US PAT NO: 5,264,214 [IMAGE AVAILABLE]
DATE ISSUED: Nov. 23, 1993
                                                                                                       L3: 73 of 93
 TITLE: Composition for bone repair INVENTOR: Woonza Rhee, Palo Alto, Co
                  Donald G. Wallace, Menlo Park, CA
Alan S. Michaels, Boston, MA
Ramon A. Burns, Jr., Fremont, CA
                                                                                                                                                                                               Richard L. Mitchell, Sunnyvale, CA
                                                                                                                                                                              ASSIGNEE: California Biotechnology Inc., Mountain View, CA (U.S.
                  Louis Fries, Los Altos, CA
Frank DeLustro, Belmont, CA
Hanne Bentz, Newark, CA
                                                                                                                                                                              ASSIGNEE. Corp.)
APPL-NO: 07/450,883
DATE FILED: Dec. 14, 1989
ART-UNIT: 183
PRIM-EXMR: Christine M. Nucker
ASST-EXMR: H. F. Sidberry
LEGAL-REP: Peter R. Shearer
 ASSIGNEE: Collagen Corporati
APPL-NO: 07/930,142
DATE FILED: Aug. 14, 1992
ART-UNT: 153
PRIM-EXMR: Nathan M. Nutter
LEGAL-REP: Karl Bozicevic
                             Collagen Corporation, Palo Alto, CA (U.S. corp.)
                                                                                                                                                                               US PAT NO: 5,192,660 [IMAGE AVAILABLE]
                                                                                                                                                                                                                                                                                    L3: 79 of 93
                                                                                                                                                                               DATE ISSUED: Mar. 9, 1993

ITTLE: ELISA methods for the determination of human platelet derived growth factor (PDGF) dimer forms present in
 US PAT NO: 5,238,950 [IMAGE AVAILABLE]
DATE ISSUED: Aug. 24, 1993
TITLE: Inhibitors of platelet-derived growth factor
INVENTOR: John W. Clader, Cranford, NJ
                                                                                                        L3: 74 of 93
                                                                                                                                                                                                  human tissues and fluids
R: Berenice Y. Reed-Gitomer, Washington Grove, MD
                                                                                                                                                                               INVENTOR:
ASSIGNEE:
                   Harry R. Davis, Berkeley Heights, NJ
Deborra Mullins, New York, NY
Stuart Rosenblum, West Orange, NJ
                                                                                                                                                                                                           The United States of America as represented by the
                                                                                                                                                                                                  Department of Health and Human Services, Washington, DC
                                                                                                                                                                                                 (U.S. govt.)
c 07/341,949
   Jay Weinstein, Upper Montclair, NJ
ASSIGNEE: Schering Corporation, Kenilworth, NJ (U.S. corp.)
APPL-NO: 07/808,997
                                                                                                                                                                                APPL-NO:
                                                                                                                                                                               APPL-NO. 07/341,549
DATE FILED: Apr. 24, 1989
ART-UNIT: 182
PRIM-EXMR: David Saunders
LEGAL-REP: Birch, Stewart, Kolasch & Birch
  APPL-NO. 07000,997
DATE FILED: Dec. 17, 1991
ART-UNIT: 122
PRIM-EXMR: Mukund J. Shah
ASST-EXMR: Y. N. Gupta
LEGAL-REP: Paul A. Thompson, Anita W. Magatti
                                                                                                                                                                               US PAT NO: 5,175,255 [IMAGE AVAILABLE]
DATE ISSUED: Dec. 29, 1992
                                                                                                                                                                               ITILE: Methods for purification of platelet-derived growth factor INVENTOR: Arlen R. Thomason, Thousand Oaks, CA Margery A. Nicolson, Pacific Palisades, CA
   US PAT NO: 5,219,759 [IMAGE AVAILABLE]
                                                                                                         13:75 of 93
   DATE ISSUED: Jun. 15, 1993
TITLE: Recombinant DNA encoding PDGF A-chain polypeptide and
                                                                                                                                                                               Margery A. Nicolson, Pacific Palisades, CA
ASSIGNEE: Amgen Inc., Thousand Oaks, CA (U.S. corp.)
07/025,344
DATE FILED: Mar. 23, 1987
ART-UNIT: 181
PRIM-EXMR: F. T. Moezie
LEGAL-REP: Julia E. Abers, Steven M. Odre
                      expression vectors
                    DR: Carl-Henrik Heldin, Uppsala, Sweden
Christer Betsholtz, Uppsala, Sweden
Bengt Westermark, Uppsala, Sweden
                    Timothy J. Knott, London, England
   Timothy J. Knott, London, England
James Scott, London, England
Graeme I. Bell, San Francisco, CA
ASSIGNEE: Chiron Corporation, Emeryville, CA (U.S. corp.)
APPL-NO: 07/574,540
DATE FILED: Aug. 27, 1990
ART-UNIT: 182
PRIM-EXMR: Robert J. Hill, Jr.
ASST-EXMR: Marianne Porta Allen
LEGAL-REP: Barbara G. McClung, Roberta L. Robins, Amy L. Collins
                                                                                                                                                                                US PAT NO: 5,162,430 [IMAGE AVAILABLE]
                                                                                                                                                                                                                                                                                      L3: 81 of 93
                                                                                                                                                                                US PAT NO: 5, 102,430 jimros AVAIS-1000
DATE ISSUED: Nov. 10, 1992
ITTLE: Collagen-polymer conjugates
INVENTOR: Woonza Rhee, Palo Alto, CA
Donald G. Wallace, Menlo Park, CA
Alan S. Michaels, Boston, MA
                                                                                                                                                                                                 Ramon A. Burns, Jr., Fremont, CA
Louis Fries, Los Altos, CA
Frank DeLustro, Belmont, CA
    US PAT NO: 5,219,739 [IMAGE AVAILABLE]
DATE ISSUED: Jun. 15, 1993
                                                                                                          L3: 76 of 93
                                                                                                                                                                                                  Hanne Bentz, Newark, CA
                                                                                                                                                                                 ASSIGNEE: Collagen Corporation, Palo Alto, CA (U.S. corp.)
APPL-NO: 07/433,441
                         DNA sequences encoding bVEGF120 and hVEGF121 and methods
                        for the production of bovine and human vascular endothelial cell growth factors, bVEGF.sub.120 and
                                                                                                                                                                                APPL-NO: U74-33,441
DATE FILED: Nov. 14, 1889
ART-UNIT: 153
PRIM-EXMR: Nathan M. Nutter
LEGAL-REP: Morrison & Foerster
                       hVEGF.sub.121
    INVENTOR: Edmund G. Tischer, Palo Alto, CA
Judith A. Abraham, Sunnyvale, CA
John C. Fiddes, Palo Alto, CA
                      Richard L. Mitchell, Sunnyvale, CA
                                                                                                                                                                                                                                                                                       L3: 82 of 93
    ASSIGNEE: Scios Nova Inc., Mountain View, CA (U.S. corp.)
APPL-NO: 07/559,041
DATE FILED: Jul. 27, 1990
                                                                                                                                                                                 US PAT NO: 5,155,027 [IMAGE AVAILABLE]
                                                                                                                                                                                 DATE ISSUED: Oct. 13, 1992
TITLE: Method of producing secreted receptor analogs and
```

```
ASSIGNEE: Institute of Moelcular Biology, Inc., Boston, MA (U.S.
biologically active peptide dimers

INVENTOR: Andrzej Z. Sledziewski, Seattle, WA
Lillian A. Bell, Seattle, WA
Wayne R. Kindsvogel, Seattle, WA
ASSIGNEE: ZymoGenetics, Inc., Seattle, WA (U.S. corp.)

APPL-NO: 07/347,291
                                                                                                                                                                                                                                                                                             corp.)
                                                                                                                                                                                                                                                                                           President and Fellows of Harvard College, Cambridge, MA
                                                                                                                                                                                                                                                                 (U.S. corp.)
APPL-NO: 07/403,969
                                                                                                                                                                                                                                                                 APPL-NO: 07/403,969
DATE FILED: Sep. 7, 1989
ART-UNIT: 189
PRIM-EXMR: Howard E. Schain
LEGAL-REP: Fish & Richardson
 APPL-NO: 07/347,291
DATE FILED: May 2, 1989
ART-UNIT: 185
PRIM-EXMR: Richard A. Schwartz
ASST-EXMR: John D. Ulm
LEGAL-REP: Seed and Berry
                                                                                                                                                                                                                                                                 US PAT NO: 5,034,375 [IMAGE AVAILABLE] L3: 8
DATE ISSUED: Jul. 23, 1991
TITLE: Process of wound healing using PDGF and EGF
INVENTOR: Harry N. Antoniades, Newton, MA
Samuel E. Lynch, Jamaica Plain, MA
 US PAT NO: 5,149,792 [IMAGE AVAILABLE]
DATE ISSUED: Sep. 22, 1992
                                                                                                                                                         L3: 83 of 93
  TITLE: Platelet-derived growth factor B chain analogs INVENTOR: Arlen R. Thomason, Thousand Oaks, CA
                                                                                                                                                                                                                                                                   ASSIGNEE: Institute of Molecular Biology, Inc., Boston, MA (U.S.
 Amen K. Homason, Hossand Caks, CA (U.S. corp.)
ASSIGNEE:
APPL-NO:
07/454,794
DATE FILED:
Dec. 19, 1989
ART-UNIT:
182
PRIM-EXMR:
ASSIST-EXMR:
Shelly J. Guest
Local Ber.
Local Be
                                                                                                                                                                                                                                                                                              corp.)
                                                                                                                                                                                                                                                                                            President and Fellows of Harvard College, Cambridge, MA
                                                                                                                                                                                                                                                                  (U.S. corp.)
APPL-NO: 07/231,145
DATE FILED: Aug. 10, 1988
ART-UNIT: 189
PRIM-EXMR: Howard E. Schain
LEGAL-REP: Fish & Richardson
   LEGAL-REP: Julia E. Abers
  US PAT NO: 5,128,321 [IMAGE AVAILABLE]
DATE ISSUED: Jul. 7, 1992
TITLE: PDGF analogs and methods of use
INVENTOR: Mark J. Murray, Seattle, WA
James D. Kelly, Seattle, WA
                                                                                                                                                           L3: 84 of 93
                                                                                                                                                                                                                                                                  US PAT NO: 5,024,841 [IMAGE AVAILABLE]
DATE ISSUED: Jun. 18, 1991
                                                                                                                                                                                                                                                                                                                                                                                                                           L3: 90 of 93
                                                                                                                                                                                                                                                                                                  Collagen wound healing matrices and process for their
                                                                                                                                                                                                                                                                    TITLE:
                                                                                                                                                                                                                                                                                                 production
                                                                                                                                                                                                                                                                   INVENTOR: George H. Chu, Sunnyvale, CA
Yasushi Ogawa, Pacifica, CA
John M. McPherson, Hopkinton, MA
George Ksander, Redwood City, CA
   James D. Kelly, Seattle, WA
ASSIGNEE: ZymoGenetics, Inc., Seattle, WA (U.S. corp.)
APPL-NO: 07/230,190
DATE FILED: Aug. 8, 1988
ART-UNIT: 181
PRIM-EXMR: F. T. Moezie
LEGAL-REP: Seed and Berry
                                                                                                                                                                                                                                                                                              Bruce Pratt, Union City, CA
                                                                                                                                                                                                                                                                                             Diana Hendricks, Brea, CA
Hugh McMullin, San Bruno, CA
                                                                                                                                                                                                                                                                   Hugh McMullin, San Bruno, CA
ASSIGNEE: Collagen Corporation, Palo Alto, CA (U.S. corp.)
07/213,726
DATE FILED: Jun. 30, 1988
ART-UNIT: 152
PRIM-EXMR: Thurman K. Page
ASST-EXMR: G. S. Kishore
LEGAL-REP: Irell & Manella
   US PAT NO: 5,124,316 [IMAGE AVAILABLE] L3: 85 of 93

DATE ISSUED: Jun. 23, 1992

TITLE: Method for periodontal regeneration
INVENTOR: Harry N. Antoniades, Newton, MA
Samuel E. Lynch, Jamaica Plain, MA

ASSIGNEE: President and Fellows of Harvard College, Cambridge, MA
                             (U.S. corp.)
Institute of Molecular Biology, Inc., Boston, MA (U.S.
                                                                                                                                                                                                                                                                    US PAT NO: 5,019,559 [IMAGE AVAILABLE] L3: 91 of 93

DATE ISSUED: May 28, 1991

TITLE: Wound healing using PDGF and IGF-II

INVENTOR: Harry N. Antoniades, Newton, MA

Samuel E. Lynch, Jamaica Plain, MA

ASSIGNEE: President and Fellows of Harvard College, Cambridge, MA
   corp.)
APPL-NO: 07/582,332
DATE FILED: Sep. 13, 1990
ART-UNIT: 181
PRIM-EXMR: F. T. Moezie
                                                                                                                                                                                                                                                                     (U.S. corp.)
APPL-NO: 07/272,090
DATE FILED: Nov. 16, 1988
ART-UNIT: 188
PRIM-EXMR: Howard E. Schain
    LEGAL-REP: Fish & Richardson
    US PAT NO: 5,110,604 [IMAGE AVAILABLE]
DATE ISSUED: May 5, 1992
                                                                                                                                                            13:88 of 93
                                 Processes for producing collagen matrixes and methods of
    using same
INVENTOR: George H. Chu, Sunnyvale, CA
Yasushi Ogawa, Pacifica, CA
John M. McPherson, Framingham, MA
                                                                                                                                                                                                                                                                     US PAT NO: 4,874,748 [IMAGE AVAILABLE] L3: 92 of 93
DATE ISSUED: Oct. 17, 1989
TITLE: Wound headling composition of TGF-alpha and PDGF
INVENTOR: Harry N. Antoniades, Newton, MA
Samuel E. Lynch, Jamaica Plain, MA
                                                                                                                                                                                                                                                                                                                                                                                                                             L3: 92 of 93
                              George Ksander, Redwood City, CA
Bruce Pratt, Union City, CA
                                                                                                                                                                                                                                                                       ASSIGNEE: Institute of Molecular Biology, Inc., Boston, MA (U.S.
                               Diana Hendricks, Brea, CA
                                                                                                                                                                                                                                                                                                  corp.)
      Hugh McMullin, San Bruno, CA
ASSIGNEE: Collagen Corporation, Palo Alto, CA (U.S. corp.)
APPL-NO: 07/630,299
                                                                                                                                                                                                                                                                                               President and Fellows of Harvard College, Cambridge, MA
                                                                                                                                                                                                                                                                     (U.S. corp.)
APPL-NO: 07/138,399
DATE FILED: Dec. 22, 1987
ART-UNIT: 186
PRIM-EXMR: Howard E. Schain
LEGAL-REP: Paul T. Clark
      APPL-NO: Unios0,299
DATE FILED: Dec. 19, 1990
ART-UNIT: 152
PRIM-EXMR: Thurman K. Page
ASST-EXMR: G. S. Kishore
LEGAL-REP: Morrison & Foerster
                                                                                                                                                                                                                                                                      US PAT NO: 4,881,757 [IMAGE AVAILABLE] L3: 93 of 93

DATE ISSUED: Aug. 29, 1989

TITLE: Wound healing and bone regeneration using PDGF and IGF-I
                                                                                                                                                              L3: 87 of 93
      US PAT NO: 5,094,941 [IMAGE AVAILABLE]
      DATE ISSUED: Mar. 10, 1992
TITLE: Monoclonal antibodies to PDGF
                                                                                                                                                                                                                                                                      INVENTOR: Harry N. Antoniades, Newton, MA
Samuel E. Lynch, Jamaica Plain, MA
Ray C. Williams, Arlington, MA
ASSIGNEE: Institute of Molecular Biology, Boston, MA (U.S. corp.)
President and Fellows of Harvard College, Cambridge, MA
      INVENTOR:
ASSIGNEE:
                                                Charles E. Hart, Brier, WA
     INVENTOR: Charles E. Hart, Brier, WA
ASSIGNEE: ZymoGenetics, Inc., Seattle, WA (U.S. corp.)
07/139,960
DATE FILED: Dec. 31, 1987
ART-UNIT: 182
PRIM-EXMR: David Saunders
LEGAL-REP: Seed and Berry
                                                                                                                                                                                                                                                                       President and Fellows of F
(U.S. corp.)
APPL-NO: 07/120,943
DATE FILED: Nov. 18, 1987
ART-UNIT: 188
PRIM-EXMR: Howard E. Schain
LEGAL-REP: Paul T. Clark
       US PAT NO: 5.035,887 [IMAGE AVAILABLE]
                                                                                                                                                               L3: 88 of 93
      US PAT NO: 5,035,887 [MAGE AVAILABLE]

DATE ISSUED: Jul. 30, 1991

ITILE: Wound healing composition of IL-1 and PDGF or IGF-1

INVENTOR: Harry N. Antoniades, Newton, MA

Samuel E. Lynch, Jamaica Plain, MA
                                                                                                                                                                                                                                                                        U.S. Patent & Trademark Office LOGOFF AT 19:25:52 ON 02 JUL 1997
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      5968 FILE HCAPLUS
     12882 (PLATELET DERIVED GROWTH FACTOR) OR PDGF OR ODGF
=> 4s homodimer or AA
     237530 FILE MEDLINE
     23147 FILE HCAPLUS
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TOTAL FOR ALL FILES

TOTAL FOR ALL FILES L9 846 L3 (A) L6

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=> +s 13 (a) 16

L8

L10

L11

260677 HOMODIMER OR AA

429 FILE MEDLINE 417 FILE HCAPLUS

428 FILE MEDLINE

416 FILE HCAPLUS

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=> •dup rem l15
PROCESSING COMPLETED FOR L15 +
                 2 DUP REM L15 (0 DUPLICATES REMOVED)
=> <d bib ab 1-
L16 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 1997 ACS
AN 1987:513455 HCAPLUS
DN 107:113455
TI Detection of PDGF-2 homodimers in human tumor cells
AU Igarashi, H.; Rao, C. D.; Siroff, M.; Leal, F.; Robbins, K. C.;
     Aaronson, S. A.
 CS Lab. Cell. Mol. Biol., Natl. Cancer Inst., Bethesda, MD, 20892, USA
SO Oncogene (1987), 1(1), 79-85
CODEN: ONCNES
LA English
AB The v-sis oncogene encodes a protein structurally and functionally
     related to human platelet-derived growth factor (PDGF). The primary
     translational product of the human sis protooncogene is a 26-kd protein, p26c-sis. This product is processed to yield a
     disulfide-linked homodimer, p55c-sis, which is further processed to a 35,000-dalton dimer, p35c-sis. Like the v-sis gene product, the PDGF-2 precursor undergoes N-linked glycosylation, implying its
     processing through the endoplasmic reticulum. The PDGF-2 product was shown to possess functional properties of PDGF. Whereas lysates of control COS-1 cells lacked mitogenic activity, lysates of COS-1
     cells transfected with a c-sis/PDGF-2 expression vector specifically
     stimulated DNA synthesis of quiescent fibroblasts. Moreover, this activity was completely inhibitable by PDGF antibody. Identical
     forms of the sist/PDGF-2 product were identified in human tumor cells that expressed c-sis/PDGF-2 transcripts. These proteins were shown to be specifically assocd. with the membrane component of the tumor
     cells and were not detectably secreted into the culture medium
     These findings support the concept that expression of the sis/PDGF-2 product in human cells responsive to its proliferative actions can
     be an important step in the processes leading to malignancy.
L16 ANSWER 2 OF 2 MEDLINE
AN 85183135 MEDLINE

TI Human platelet-derived growth factor stimulates prostaglandin synthesis by activation and by rapid de novo synthesis of
cyclooxygenase.

AU Habenicht A J; Goerig M; Grulich J; Rothe D; Gronwald R; Loth U;
Schettler G; Kommerell B; Ross R
SO JOURNAL OF CLINICAL INVESTIGATION, (1985 Apr) 75 (4) 1381-7.
Journal code: HS7. ISSN: 0021-9738.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals; Cancer Journals
FM 8508
AB Human platelet-derived growth factor (PDGF) stimulated prostaglanding
     (PG) E2 synthesis in the cell cycle of Swiss 3T3 cells at two
    distinct time intervals, with a first plateau within 10 min and a second plateau within 2-4 h after addition of PDGF. At 4 h, the
     concentration of PGE2 in PDGF-stimulated cultures exceeded the
     quiescent control cells by a factor of 10-15. Quiescent cells incubated with up to 16 microM exogenous arachidonic acid (AA) synthesized only small amounts of PGE2. In contrast, 4 h after
    addition of PDGF, the concentration of PGE2 synthesized from exogenous AA exceeded that in quiescent cultures by a factor of 28.
           effect of PDGF stimulation on PG synthesis from exogenous AA
    could not be explained by growth factor-mediated increase in the cellular free AA pool as shown in experiments using [14C] ***AA*** also stimulated synthesis of PGI2 (prostacyclin), thromboxane, and PGF2 alpha from exogenous AA. While inhibition of protein synthesis by 10 micrograms/ml cycloheximide had no effect on
    the early increase in PGE2 synthesis, the second increase was
completely prevented. Additionally, cycloheximide treatment at 6 h
after PDGF stimulation resulted in rapid decline of PGE2 synthesis
    from exogenous AA. Quiescent cultures pretreated with 100 microM aspirin and stimulated by PDGF thereafter recovered from cyclooxygenase inhibition within 180 min. Our results suggest that
    phospholipase activation and resultant AA release is not sufficient to induce the burst of PG synthesis observed in PDGF-stimulated cells. Instead, PDGF stimulates PG synthesis by direct effects on
    the PG-synthesizing enzyme system, one involving a protein synthesis-independent mechanism and another that requires rapid
    translation of cyclooxygenase.
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TOTAL FOR ALL FILES

TOTAL FOR ALL FILES

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L13

844 L9 AND PY>1987

1 FILE MEDLINE

1 FILE HCAPLUS

=> «s odgf

L17 2 FILE MEDLINE 3 FILE HCAPLUS

TOTAL FOR ALL FILES 5 ODGF

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=> •d bib ab 1-

L20 ANSWER 1 OF 3 MEDLINE

DUPLICATE 1

AN 86118705 MEDLINE

TI A human osteosarcoma cell line secretes a growth factor structurally related to a homodimer of PDGF A-chains

AU Heldin C H; Johnsson A; Wennergren S; Wernstedt C; Betsholtz C; Westermark B

SO NATURE, (1986 Feb 6-12) 319 (6053) 511-4. Journal code: NSC. ISSN: 0028-0836. CY ENGLAND: United Kingdom

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals; Cancer Journals

EM 8605

AB Platelet-derived growth factor (PDGF), as purified from fresh human platelets, is a protein of relative molecular mass (Mr) 30,000 composed of two disulphide-linked subunit chains of similar size named A and B (ref. 1). The dimer structure of PDGRF seems to be important for its biological effects, as reduction irreversibly inactivates the factor, it is not known, however, whether PDGF exists as a heterodimer or as a mixture of homodimers. Amino-acid sequence analysis has revealed that the A- and B-chains of human PDGF are related to each other, and that the B-chain is almost identical to part of the v-sis gene product of simian sarcoma virus (SSV). There is experimental evidence that a PDGF-like protein is indeed operational in SSV-induced transformation and the biologically active v-sis product is probably structurally similar to a putative dimer of PDGF B-chains. PDGF-like growth factors and/or a 4.2-kilobase (kb) c-sis transcript are present in several transformed mammalian cell lines and in certain nontransformed cells; cloned c-sis complementary DNA from human T cells transformed with human T-lymphotropic virus (HTLV) or from human endothelial cells contains the coding sequence for a putative PDGF B-chain precursor, but apparently lacks PDGF A-chain sequences. We have previously partially purified and characterized a PDGF-like growth factor from U-2 OS cells (osteosarcoma-derived growth factor, "**ODGF***) and shown that this factor has structural, functional and immunological characteristics in common with PDGF. We describe here a procedure for the preparation of homogeneous ***ODGF*** and provide evidence that this factor, which binds to the PDGF receptor, has a structure similar to a homodimer of PDGF A-chains.

L20 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 1997 ACS AN 1982:50352 HCAPLUS

DN 96:50352

Demonstration of an antibody against platelet-derived growth factor
 AU Heldin, C. H.; Westermark, B.; Wasteson, A.
 Inst. Med. Physiol. Chem., Uppsala Univ., Uppsala, S-751 23, Swed.
 Exp. Cell Res. (1981), 136(2), 255-61
 CODEN: ECREAL; ISSN: 0014-4827

DT Journal LA English

AB An antibody was raised in a rabbit against platelet-derived growth factor (PDGF), purified from human platelets. The antibody recognized specifically 125I-labeled PDGF, as demonstrated by gel recognized specinically 1201-labeled POSF, as demonstrated by electrophoretic anal. of pptd. radioactivity. Addn. of Igs from the immune serum to cell cultures together with POSF inhibited the multiplication-stimulating activity of the growth factor. Further, multiplication-stimulating activity in crude platelet lysate was retained upon passage over a column of Sepharose-bound anti-PDGF; it was recovered after elution of the column with acid. A radioimmunoassay for PDGF was developed, permitting the detn. of 5 ng PDGF/mL. Platelet factor 4 and .beta.-thromboglobulin, both being proteins of the platelet .alpha. granule, did not cross-react in the radioimmunoassay for PDGF. The radioimmunoassay was utilized to examine the immunol. relation between PDGF and some other growth factors. The anionic growth factors previously demonstrated in platelets were antigenically distinct from cationic PDGF. Similar results were obtained with epidermal growth factor (EGF) of fibroblast growth factor (FGF). In contrast, osteosarcoma-derived growth factor showed some cross-reactivity in the radioimmunoassay for PDGF. Apparently, osteosarcoma-derived growth factor (
ODGF) has both phys.-chem. and immunol. properties in common with PDGF.

L20 ANSWER 3 OF 3 MEDLINE AN 81117511 MEDLINE

DUPLICATE 2

TI Chemical and biological properties of a growth factor from

human-cultured osteosarcoma cells: resemblance with platelet-derived growth factor

Heldin C H; Westermark B; Wasteson A

SO JOURNAL OF CELLULAR PHYSIOLOGY, (1980 Nov) 105 (2) 235-46. Journal code: HNB, ISSN: 0021-9541.

DT Journal; Article; (JOURNAL ARTICLE) LA English

for binding to human-cultured glial cells.

FS Priority Journals EM 8108 AB A human osteosarcoma cell line, U-2 OS, cultured under serum-free 3 A human osteosarcoma cell line, U-2 OS, cultured under serum-free conditions, was shown to produce a growth factor (osteosarcoma-derived growth factor, ****ODGF***) for human-cultured glial cells, fibroblasts, and other cells. ****ODGF***, collected from the spent medium of 2 OS cultures, was purified by a sequence involving heparin-Sepharose chromatography, hydrophobic chromatography, gel chromatography, and preparative gel electrophresis in SDS. Purified ***ODGF***, at a concentration of 3 ng/ml, elicited a mitogenic response in human glial cells equivalent to 50% of that afforded by human serum at a final equivalent to 50% of that afforded by human serum at a final concentration of 1%. The preparation was estimated to be > 50% pure. The biological activity of ***ODGF*** resided in a cationic, relatively heat-resistant, reduction-susceptible protein with a molecular weight of 30,000 (by gel chromatography and SDS-gel electrophoresis). The electrophoretic behaviour of radioiodinated ***ODGF*** suggested that the protein was composed of two different polypeptide chains (about 13,000-14,00 and 16,000-17,000 daltons, respectively linked via disulphide bonds. The molecular makeup of ***ODGF*** was thus similar to that of platelet-derived growth factor. 125I- ***ODGF*** could be precipitated by an antibody to platelet-derived growth factor, indicating that the two factors were immunologically related.

Resemblance with platelet-derived growth factor was also indicated by the finding that the latter (but not, e.g., fibroblast growth factor or epidermal growth factor) competed with 125I- ***ODGF***